

~~CALIFORNIA STATE BOARD OF FORESTRY~~
~~THE CALIFORNIA FISH AND GAME COMMISSION~~

California Fish and Game Commission

Board of Forestry and Fire Protection

**JOINT POLICY STATEMENT ON PACIFIC SALMON
AND ANADROMOUS TROUT**

I. INTRODUCTION

The Fish and Game Commission (Commission) and the Board of Forestry and Fire Protection (Board) find that the four species of Pacific salmon and anadromous trout found in California streams, including ~~chinook~~ Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), ~~steelhead~~ anadromous rainbow trout (*Oncorhynchus mykiss*), ~~(commonly known as steelhead)~~, and anadromous coastal cutthroat trout (*Oncorhynchus clarkii*) (~~herein jointly referred to as salmonids~~) (~~herein jointly referred to as anadromous trout~~) are vitally important ecological and economic resources in California.

The Commission and the Board also find that there is considerable scientific, commercial, and public concern over the decline of ~~chinook~~ Chinook salmonids, ~~coho salmon, steelhead trout, and coastal cutthroat anadromous trout~~ in California. The goal of the Commission and the Board is to recover harvestable salmon and steelhead populations, restore watersheds, and so contribute to building healthy communities. Several actions have been taken by the State and the federal ~~Federal~~ government to provide legal protective status for ~~many Pacific salmonids and anadromous trout~~. Under the California Endangered Species Act, the Commission listed Sacramento River winter run chinook as endangered in September 1989, coho salmon south of San Francisco Bay as endangered in December 1995, Sacramento River spring run chinook salmon as threatened in February 1999, and coho salmon north of San Francisco Bay as a candidate species in April 2001. Under the California Endangered Species Act (CESA), the Commission has listed runs of Chinook salmon and coho salmon, while under the Federal

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Endangered Species Act (ESA) the National Marine Fisheries Service (NMFS) has listed runs of Chinook salmon, coho salmon and stocks of anadromous rainbow trout (Appendix 1).

~~Under the Federal Endangered Species Act, the National Marine Fisheries Service (NMFS) listed coho salmon in the Central California coast as threatened in December 1996, coho salmon in the Southern Oregon/Northern California coasts as threatened in June 1997, Sacramento River winter-run chinook salmon as threatened in August 1989 and endangered in January 1994, Central Valley spring-run chinook as threatened in November 1999, California Coastal chinook salmon as threatened in November 1999, Southern California steelhead trout as endangered in October 1997, South Central California Coast steelhead trout as threatened in October 1997, Central California Coast steelhead trout as threatened in October 1997, Central Valley California steelhead trout as threatened in May 1998, and Northern California steelhead trout as threatened in August 2000.~~

~~I. Therefore, the Commission and Board adopt the following joint policy for the Department of Fish and Game and the Department of Forestry and Fire:~~

~~C. The departments shall develop a coast-wide watershed assessment program and seek funding to implement such a program consistent with the goals and objectives of the assessment program. One goal of this program shall be a GIS database for managing and analyzing population and habitat data. Information collected as part of this program for resource management purposes shall be made available to the public. This program should result in a scientifically sound monitoring program for determining fish population and habitat status and trends;~~

~~D. Existing salmon habitat shall not be diminished or have its recovery impeded by land use activities without offsetting the impacts caused by these activities. All feasible steps shall be taken to protect habitat and facilitate habitat recovery. The Board and Commission shall oppose any project which will result in the irreplaceable loss of fish, the net loss of fish habitat and/or impede the recovery of populations and habitat. Artificial production shall not be considered as appropriate mitigation for loss of wild fish or their habitat; and~~

~~E. In accordance with the California Endangered Species Act (CESA) and Fish and Game Code Sections 2050 et seq., the departments shall take appropriate action to prevent or mitigate any project that will result in the unauthorized take of Sacramento River winter-run chinook, Sacramento River spring-run chinook, coho salmon south of San Francisco Bay, coho salmon north of San Francisco Bay or any other Pacific salmon or anadromous trout species that subsequently becomes a candidate or listed under the CESA.~~

The Commission and Board also find that forestry practices interact with watershed and riparian processes and can positively or negatively affect upstream and downstream freshwater ~~salmonid~~

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habitat for salmonids. Properly implemented forestry practices can reduce the risk of catastrophic fires that impact water quality and other important habitat elements important to anadromous salmonids. Sound forestry practices can help maintain and can restore the riparian functions that are linked to salmonid and anadromous trout habitats.

The Commission and the Board also find that strong pressures for parcelization, fragmentation, and land use conversion exist. The loss of forestland to other uses can degrade habitat. The retention and active management of forested lands in a manner compatible with the freshwater life histories of salmonids is vital to maintaining anadromous fisheries salmonid habitat that is in good condition and to restoring degraded habitat. Retention of viable, working forest landscapes is therefore essential to salmonids Pacific salmon and anadromous trout.

Therefore, the Commission and the Board establish these goals;

1. to recover harvestable salmonid and anadromous trout populations,
2. maintain and restore watersheds,
3. retain managed working forests on timberlands,
4. encourage watershed-scale programmatic approaches to achieve these goals,
5. and so contribute to building healthy communities.

Furthermore, the Commission and Board adopt the following joint policy for the Department of Fish and Game and the Department of Forestry and Fire Protection (Joint Policy). This Joint Policy is intended to address the recovery, conservation, preservation, and restoration of listed salmonid fish populations and their habitats through sound science in the implementation of watershed-based forest management actions. The Joint Policy emphasizes that these those species are in great peril and those that forest management practices that have the greatest potential to assist in their recovery. This Joint Policy encourages positive forest management practices, particularly those associated with roads, unstable areas, and within or adjacent to riparian areas along streams, that protect salmonid habitat by: 1) reducing stream temperatures; 2) reducing sediment levels in streams; 3) enhancing composition and abundance of fish species

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and aquatic macroinvertebrates; 4) stabilizing stream banks and streamside areas; 5) increasing instream structural complexity; 6) increasing large woody debris recruitment; and 7) increasing base flows in streams.

Adequate staffing and funding are necessary to implement the actions of this Joint Policy. The Commission and the Board, along with their respective departments, will seek appropriate funding for the implementation of the ~~tasks~~ actions identified in this Joint Policy. Funding priority will be given to programmatic, watershed-scale restoration activities to provide the greatest benefit to ~~listed~~ salmonids ~~and anadromous trout~~ on forested lands.

II. JOINT POLICY OF THE BOARD AND COMMISSION FOR THEIR RESPECTIVE DEPARTMENTS

~~In addition, the Commission specifically charges the Department of Fish and Game (DFG) with the following:~~

~~B. DFG should continue to use its Watershed Academy for education and outreach. The Watershed Academy should be available statewide to any interested persons provided that there is adequate funding;~~

~~E. In the event of disagreement over implementation of this policy with CDF, the DFG shall inform the Commission of the disagreement; and~~

~~F. Annually, DFG will include a statement in the Director's report to the Commission addressing the status of implementation of this policy and of Pacific salmon and anadromous trout resources.~~

~~III. The Board directs Board staff and the Department of Forestry and Fire Protection (CDF) as follows:~~

~~A. Administer CDF programs consistent with this policy statement;~~

~~B. Provide support to the Watershed Academy, consistent with the extent that it is directed at programs and activities that are funded, permitted, or carried out by CDF.~~

~~C. Evaluate the desirability of preparing supportable listing packages for designating any of the Pacific salmon and anadromous trout individually or as a group as a sensitive species under Title 14 of the California Code of Regulations, Sections 919.12, 939.12, and 959.12, in addition to developing protection measures in other rule sections.~~

~~D. Prepare and submit to the Board proposed rules packages consistent with multi-species recovery strategies for protecting Pacific salmon and anadromous trout populations and habitat during timber operations;~~

~~E. Until Pacific salmon and anadromous trout multi-species recovery strategies are developed for California, provide particular attention to potential impacts to Pacific salmon and anadromous trout in the THP review process and seek input from the DFG where THPs are submitted for areas containing Pacific salmon and anadromous trout habitats;~~

~~F. Consider Pacific salmon and anadromous trout habitat in the context of 1) overall aquatic ecosystem assessment and management in the pilot watershed projects of the Klamath Province, and 2) where the information has been developed, consistent with the direction derived from the North Coast Watershed Assessment Program;~~

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~~G. In the event of disagreement over implementation of this policy with DFG, the CDF shall inform the Board of the disagreement; and~~

~~H. Annually, CDF will report to the Board regarding the status of implementation of this policy and of the~~

The Commission and Board adopt the following Joint Policy for the Department of Fish and Game (DFG) and the Department of Forestry and Fire Protection (CAL FIRE) (herein jointly referred to as departments):

- A. The departments will administer all programs consistent with this policy statement;
- B. The departments will report annually to the Commission and the Board: 1) progress on implementation of this policy; 2) progress on implementation of strategies to recover listed salmonids; ~~the salmonid recovery strategies; and 3) the status of salmonid Pacific salmon and anadromous trout~~ resources, and 4) actions to be taken in the coming year;
- C. In the event of disagreement over implementation of this policy, the departments will inform the Commission and Board of the disagreement;
- D. The departments will ~~shall~~ be guided by the understanding that it is the desire of the State of California to: 1) recover ~~salmonid Pacific salmon and anadromous trout~~ populations to viable self-sustaining levels; 2) maintain wild populations where they exist; 3) ~~restore re-~~ establish populations where feasible; 4) sustain the ~~human uses that depend on them; and~~ social, economic, and cultural uses that depend on working forest landscapes and ~~salmonids Pacific salmon and anadromous trout~~; and 5) support actions that will ~~ultimately allow for~~ lead to delisting of listed salmonids;
- E. In accordance with laws and regulations protecting listed species, the departments will use their respective authorities to ensure that any project that the departments are notified of and that may result in take of listed salmonids either avoids take or is authorized for such take;
~~In accordance with the California Endangered Species Act (CESA) and the Endangered Species Act (ESA), the departments will use their respective authorities to prevent any project that will result in unauthorized take and to assure that any project that results in take is duly authorized under the CESA and the ESA;~~

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- F. The departments will actively cooperate with each other and with other State and Federal agencies, private landowners, academic institutions and the public to ~~craft comprehensive multi-species recovery strategies and plans for coastal and Central Valley Pacific salmon and anadromous trout populations and their habitats in coordination with the NMFS and the United States Fish and Wildlife Service;~~ facilitate and encourage forest management activities, which while, to the extent feasible: 1) ~~implementing~~ the Recovery Strategy for California Coho Salmon, approved by the Commission in February 2004 (see Appendix 2 for timber management related recommendations); 2) ~~implementing~~ the Steelhead Restoration and Management Plan for California, approved by DFG in 1996; 3) ~~integrating~~ and emphasizeing recovery of all listed or candidate anadromous species into recovery strategies and plans whenever possible. Programmatic approaches to achieve these goals are encouraged;
- G. Using best available science, the departments will continue to work with the Board to assess the effectiveness of existing Forest Practice Rules and, as necessary, assist the Board in developing new forest practice regulations that avoid or mitigate adverse individual and cumulative impacts on salmonid habitat to a level which is less than significant under the California Environmental Quality Act and integrate with applicable sections of the Fish and Game Code;
- H. In cooperation with other agencies and in conjunction with the Board's ongoing work with its Research and Science Committee (RSC), both the departments~~CAL FIRE and DFG~~ will review the potential effects of global climate changes on forestry-fisheries interactions and the suite of potential options and actions necessary to protect forest lands and anadromous-salmonid populations;
- I. The departments will assist the Board in developing monitoring programs for evaluating the effectiveness of adopted forest practice regulations and the effectiveness of mitigation measures for protecting and, when feasible, restoring anadromous salmonid habitat. Two such programs already receive support by the departments: the Interagency Mitigation Monitoring Program (IMMP) and the Forest Practice Rules Implementation and Effectiveness Monitoring Program (FORPRIEM) (see Appendix 2-3);

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- J. The departments will assist the Commission and the Board in developing and implementing ~~anadromous~~ salmonid monitoring programs and regional watershed assessments in order to assess the status of recovery and restoration efforts. These programs will be based on scientifically sound methodologies for determining fish population attributes; habitat status and trends, and progress toward restoration and recovery. Appendix 3 4 contains a description of the components for monitoring and adaptive management programs that may be appropriate to consider for any forested watershed with ~~anadromous~~ salmonids;
- K. The departments will participate in and assist the Board's Monitoring Study Group (MSG) contingent upon availability of staff, funding and logistical support. This group promotes information sharing, cooperation, and trust among state agencies, the public, and the timber industry, so that 1) state agencies collect sound, scientifically-based monitoring data in an efficient and effective manner; 2) data analyses are properly undertaken; and 3) data is presented in a user-friendly fashion on a web-based server;
- L. In order to achieve recovery goals and conserve listed salmonids and the habitats that support them, the ~~D~~departments will 1) continue evaluating the Forest Practice Rules and ~~Fish and Game R~~DFG regulations, using scientific research and monitoring data from salmonid listing and recovery actions, in order to make recommendations for changes to regulations consistent with salmonid recovery plans; 2) use their respective authorities to ensure that any project that the departments are notified of and that may result in take of listed species either avoids take or is authorized for such take in accordance with laws and regulations protecting listed species;~~oppose any project or action that will result in the unauthorized take of listed fish or that will measurably impede the recovery of populations or their habitat;~~ 3) take all feasible steps for the recovery, conservation, preservation, and restoration of listed ~~fish~~salmonid populations and their habitats; and 4) give priority to those actions that are identified in recovery plans;
- M. The departments will ~~W~~work with National Marine Fisheries Service (NMFS) to 1) develop Habitat Conservation Plan(s) for all forestry practices state-wide in a timely

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~~fashion in order to aid in the recovery of all listed salmonids, and 2) implement them~~
consistent with federal recovery plans for listed ~~anadromous~~ salmonids.

III. SPECIFIC POLICY FROM THE COMMISSION TO THE DEPARTMENT OF FISH AND GAME

In addition, the Commission specifically charges DFG as follows:

- A. ~~DFG shall continue to implement the Salmonid Restoration Grant program (SB-271) and other assigned programs.~~ Implement fisheries restoration grant programs and other restoration programs consistent with the availability of annual funding to implement high priority recovery activities in an efficient and effective manner. ~~and the~~ The Commission acknowledges ~~that SB-271 that such grant and restoration programs~~ cannot guarantee instream flows or "safeguard" habitat from additional damages to watershed processes stemming from past land use practices. ~~SB-271 Grant and restoration funding~~ can help to restore past physical habitat damages and initiate plans for ~~and start to plan for~~ watershed-scale restoration activities on forested lands;
- B. ~~DFG shall continue to~~ Review timber harvesting plans based on authorized annual appropriation of funds and position authority, and ~~when~~ are appropriate, recommend to CAL FIRE: 1) measures which will avoid, minimize and fully mitigate impacts to listed salmonids and ~~prevent~~ avoid, or mitigate, and minimize adverse impacts upon salmonid and anadromous trout habitat steelhead; and 2) measures that will facilitate recovery of listed salmonid and anadromous trout populations and the habitats that support them. Artificial production and/or fish rescue/translocation will generally ~~neither~~ be considered inappropriate mitigation for loss of wild fish ~~nor suitable for recovery;~~
- C. ~~DFG shall continue to provide~~ Provide an active liaison to the Board and ~~the Department of Forestry and Fire Protection (CDF)~~ CAL FIRE based on authorized annual appropriations of funds on issues related to timber harvest, ~~and~~ forestry practices, and fire protection for landscapes occupied by salmonids ~~Pacific salmon and anadromous trout;~~
- D. Based on authorized annual appropriations of funds, Ensure the full implementation of salmonid population and habitat monitoring programs to assist in the conservation, preservation, and enhancement of these species; and

- E. Assist the Board and CAL FIRE in developing monitoring programs necessary for evaluating the effectiveness of mitigation measures and forest practice rules in preventing, or minimizing adverse impacts to salmonids, and the effectiveness of measures intended to facilitate recovering and restoring ~~anadromous salmonids~~ in forested watersheds.

**IV. SPECIFIC POLICY FROM THE BOARD TO THE DEPARTMENT OF FORESTRY
AND FIRE PROTECTION**

In addition, the Board specifically charges CAL FIRE as follows:

- A. Address potential impacts to salmonids and anadromous trout, consistent with state and federal recovery strategies, in CAL FIRE's project review processes and ~~seek input from~~ consult with DFG when projects are submitted in planning watersheds containing salmonid ~~and anadromous trout~~ habitats;
- B. Support a Technical Advisory Committee (TAC) in order for the Board to adopt permanent rules for protection of listed ~~anadromous~~ salmonids based upon a study of factors that significantly effect the condition of timberlands (ref. PRC § 4552) and through consultation with various groups including agencies and educational institutions (ref. PRC § 4553). In collaboration with fisheries experts, the TAC will collect and evaluate scientific information and knowledge about ~~anadromous~~ salmonids and forest management activities in relation to recovery, preservation, and conservation of listed species;
- C. Provide staff support to the Board's Research and Science Committee (RSC), to consistently provide independent credible scientific information for Forest Practice Rule development or modification. The RSC will provide technical recommendations to the Board for monitoring projects and provide sound technical advice to the Board regarding watershed-related resource issues.
- D. Provide support to the Monitoring and Tracking Sub-Committee of the MSG. This sub-committee will collaborate with DFG and others to assist in:
 - 1) Reviewing the effectiveness and appropriateness of monitoring being conducted on non-federal timberlands, and make recommendations for improvements.

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- 2) Evaluating effectiveness of monitoring conducted to assess potential impacts of timber harvest operations on the beneficial uses of water related to ~~listed anadromous salmonids fish species~~.
- 3) Evaluating costs and benefits of monitoring metrics and techniques to aid the Board, timberland owners, regulatory agencies, and the public in selecting technically adequate, efficient, and effective monitoring that will ensure protection and recovery of ~~listed salmonids species~~.
- E. Provide support for development of risk-based approaches to cumulative watershed effects analysis. Additionally, work to improve programmatic long-term management models. Scientifically based models need to be expanded and improved to provide sound science-based reliable information that include considerations for the recovery, preservation, conservation, and restoration of salmonid ~~and anadromous trout~~ populations and the habitats that support them; and
- F. CAL FIRE's Fire and Resource Assessment Program will assist the Board in developing a web-based long term repository for science based monitoring information and scientific research to maintain quality control and allow for the dissemination of information to agencies and the interested public contingent upon availability of staff, funding and logistical support.

Appendix 1. State and Federal listings of salmonids~~Pacific salmon and anadromous trout~~
in California

<u>Species</u>	<u>Status</u>	<u>Effective Date</u>
<u>Statutory Act- Geographic Range</u>		
<u>Coho Salmon</u>		
<u>CESA- South of San Francisco</u>	<u>endangered</u>	<u>12/31/1995</u>
<u>CESA- San Francisco to Punta Gorda</u>	<u>endangered</u>	<u>3/30/2005</u>
<u>CESA- Punta Gorda to Oregon border</u>	<u>threatened</u>	<u>3/30/2005</u>
<u>ESA- Central California Coastal</u>	<u>endangered</u> <u>(threatened)</u>	<u>8/29/2005</u> <u>(12/2/1996)</u>
<u>ESA- Southern Oregon--Northern California Coasts</u>	<u>threatened</u>	<u>6/5/1997</u>
<u>Chinook Salmon</u>		
<u>CESA - Sacramento River Winter-Run</u>	<u>endangered</u>	<u>9/22/1989</u>
<u>CESA - Sacramento River Drainage Spring-Run</u>	<u>threatened</u>	<u>2/5/1999</u>
<u>ESA – Sacramento River Winter-Run</u>	<u>endangered</u> <u>(threatened)</u>	<u>2/3/1994</u> <u>(11/1990)</u>
<u>ESA - Central Valley Spring-Run</u>	<u>threatened</u>	<u>11/15/1999</u>
<u>ESA - California Coastal</u>	<u>threatened</u>	<u>11/15/1999</u>
<u>Anadromous Rainbow Trout (Steelhead)</u>		
<u>ESA - Southern California</u>	<u>endangered</u>	<u>10/17/1997</u>
<u>ESA - South-Central California Coast</u>	<u>threatened</u>	<u>10/17/1997</u>
<u>ESA - Central California Coast</u>	<u>threatened</u>	<u>10/17/1997</u>
<u>ESA - Central Valley, California</u>	<u>threatened</u>	<u>5/18/1998</u>
<u>ESA - Northern California</u>	<u>threatened</u>	<u>8/7/2000</u>

Appendix 2 Timber Management Recommendations (Excerpted from Recovery Strategy for California Coho Salmon, pages 7.15 – 7.18. DFG, February 2004)

ALT-C-01 California Range-wide Coho Salmon Recovery Team (CRT) recommends government commitment of adequate financial, material, and personnel support for the life of the Recovery Strategy for on-the-ground recovery actions, identified in the Recovery Strategy. Possible funding mechanisms may include:

- a. Legislation specifically identifying funding for recovery;
- b. Cost-share programs with private landowners, stakeholder groups and local governments; and
- c. Endowment and/or grant programs cooperatively with private sources.

ALT-C-02 The Department should provide technical expertise to support appropriate cooperatively undertaken recovery actions, which may include:

- a. Technical advisors to assist in the development of restoration proposals;
- b. Technical expertise to assist in the implementation of recovery activities on-the-ground; and
- c. Technical expertise to assist in training and education on coho restoration projects.

ALT-C-03 The Department should develop and implement a program to design and implement a coho salmon recovery plan for individual CALWATER Planning Watersheds. The program should promote and enable cooperative working relationships between agencies, landowners and residents. This program should include:

- a. Federal and State funding to assist landowners in performing watershed analysis in a manner usable by the Department;
- b. A systematic evaluation at the watershed level to identify key limiting factors for the recovery of coho salmon;
- c. Identification of site-specific sources and locations of the key limiting factors;
- d. Identification of restoration projects for watershed transportation systems, fish passage, slope stabilization measures, erosion control measures and drainage structures;
- e. Identification of beneficial management practices to protect existing values;
- and
- f. Use of these plans and the data that support them as the principle reference document, which would save landowners and/or project proponents additional costs associated with repetitive analysis and paperwork for each project.

ALT-C-04 The Department should develop an information repository system for individual Planning Watersheds that utilizes and builds upon existing information, adding new information as it becomes available, while ensuring adequate confidentiality for information specifically pertaining to an individual's private property.

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ALT-C-05 The Department should promote and support programmatic approaches to address key limiting factors in each CALWATER Planning Watershed with a watershed plan. Include these components:

- a. Where appropriate and where costs to landowners are offset by monetary assistance, technical assistance or regulatory incentives, encourage landowners to develop and implement Road Management Plans that contribute to the restoration of coho salmon habitat;
- b. Where appropriate and where the costs to landowners are offset by incentives, encourage the use of a licensed engineer to assist in the design and construction of watercourse crossings;
- c. Continuing education and training (classroom and field) to ensure watercourse crossings are appropriately designed, constructed and maintained;
- d. Cooperative habitat restoration projects that extend across ownerships to address habitat restoration efforts in a coordinated and cost effective manner; and
- e. State funding to assist landowners to implement coordinated watershed riparian vegetation improvement programs that:
 - i. Identify areas within the riparian zone where planting of riparian vegetation, including conifers, to improve coho salmon habitat is appropriate and
 - ii. Promote vegetation modification (e.g., thinning, removal of undesired competitive vegetation) to accelerate riparian vegetation recovery and enhancement for coho salmon habitat.

ALT-C-06 The Department should set up a long term monitoring system that measures the implementation and effectiveness of Forest Practice Rules in effect at the time of the monitoring. The monitoring shall measure the effectiveness of the rules for maintenance and recovery of coho salmon habitat.

ALT-C-07 Encourage California Department of Forestry and Fire Protection (CDF) and California Geological Survey in concert with the Board of Forestry (through the Monitoring Study Group) to develop a monitoring program to evaluate whether mitigation measures implemented by Registered Professional Foresters as part of Timber Harvest Plans (THPs) are effectively reducing the risk of mass soil movement associated with harvesting operations, including road and landing construction. Any monitoring system should be designed to compare harvested areas to non-harvested areas so it can be determined whether harvesting, road and landing construction activities increase the likelihood of mass soil movement. The THP work completion report and the Monitoring Study Group's Hillslope Monitoring Program, as well as periodic air photo flights and photo interpretation, could provide the basis for monitoring and evaluation.

ALT-C-08 CDF document voluntary efforts taken by forest landowners beneficial to coho salmon that:

- a. Provide mitigation measures that exceed FPRs requirements; and/or
- b. Are identified in specific CALWATER Watershed Recovery Plans.

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ALT-C-09 The Department should develop a system to evaluate implementation and effectiveness of voluntary efforts to recover coho salmon populations.

ALT-C-10 The Department should develop, with appropriate peer review, a long-term consolidation and analysis of resource assessments and monitoring data.

ALT-C-11 The Department should collaborate with CDF and appropriate industry groups to provide watercourse training and roads assessment watershed academy.

ALT-C-12 Acquire conservation easements or land in fee title from willing landowners to protect coho salmon habitat.

ALT-C-13 The Department should seek funding for staff to improve effectiveness of the Department timberland conservation program.

ALT-C-14 Continue participation in full review of THPs and participation and other timberland conservation activities associated with managing timberlands.

ALT-C-15 In watersheds with coho salmon, the Department will prepare a “coho salmon biological assessment” when acting as a Lead or Responsible agency under the California Environmental Quality Act (CEQA) for timberland conservation activities, including but not limited to the review of timber harvesting plans. A “coho salmon biological assessment” is an assessment by the Department of project effects, if any, on coho salmon. The biological assessment will include conclusions by the Department regarding potential for the project to “jeopardize” the long-term survival of or “take” coho salmon. It will also include the Department’s assessment of the significance of project impacts for purposes of “mandatory findings of significance” under 14 CCR §15065 (a), (b), and (c).

ALT-C-16 In conjunction with CDF, qualified landowners representatives and experts, and qualified independent scientists with appropriate expertise, and consistent with the availability of staff, the Department will monitor for five years (or more if necessary to develop an adequate sampling regime) the implementation of the FPR in effect at the time to determine whether these rules are consistent with the long-term survival of coho salmon.

ALT-C-17 If results of monitoring, based on substantial evidence as the term is defined by 14 CCR §15384, conclude that the implementation of the FPR s are not providing adequate protection for the long-term survival of coho salmon, the Department in cooperation with CDF and interested stakeholders will develop recommendations to ensure adequate protection for the long-term survival of coho salmon.

[There is no number 18]

ALT-B-19 Recommend that a “proof of concept” pilot program be developed and implemented to test a mathematical or scientific method of cumulative effects analysis as was suggested in the

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2001 report, “A Scientific Basis for the Prediction of Cumulative Watershed Effects” (otherwise known as the “Dunne Report”), by the U.C. Committee on Cumulative Watershed Effects. The pilot program would be developed and implemented by a panel of experts such as those at U.C. in cooperation with the Department, CDF, and SWRCB.

ALT-B-20 Recommend that CDF and the Board of Forestry work with the Department and other interested agencies and stakeholders to establish a procedure for THPs to document and evaluate the implementation and effectiveness of coho-related mitigation measures prior to the official completion inspection by CDF and other agencies.

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~~6/4/2008~~ 7/15/08

Appendix 2 3 Existing Monitoring Programs

Forest Practice Rules Implementation and Effectiveness Monitoring (FORPRIEM)

Program. FORPRIEM provides sound science based data on the adequacy of the implementation and effectiveness of Forest Practice Rules specifically designed to protect water quality and riparian habitat. It uses information collected during THP Work Completion Inspections and Erosion Control Maintenance Inspections. FORPRIEM collects information on randomly located road segments, WLPZ segments, and watercourse crossings and uses a random 10 percent sample of THPs throughout the state. It is a continuation of monitoring that was previously completed under the MCR monitoring program, with data collection beginning in the fall of 2007. Data is primarily obtained by CAL FIRE Forest Practice Inspectors, but other agency personnel are invited to participate in this monitoring program. Data collected in this Program will complement data obtained in the IMMP monitoring program.

Interagency Mitigation Monitoring Program (IMMP). This program will build on what has been learned in CAL FIRE/Board's earlier Hill Slope Monitoring Program, Modified Completion Report, and other monitoring efforts. The IMMP will emphasize data collection and evaluation of high risk plans and the effectiveness of practices implemented at high risk locations within a plan to protect water quality and aquatic habitats. Effectiveness here refers to determining if prescribed measures applied during the plan operations resulted in the intended conditions (MOU Monitoring Workgroup 2005). The Program results will be reported to the Board. The primary monitoring related objectives of the IMMP are:

- Determine how often practices designed to reduce impacts to water quality at high risk locations within a plan are properly implemented (including but not limited to mitigation measures developed by the Registered Professional Forester (RPF) and/or an interagency team).
- Determine how often these practices, when properly implemented, are effective in protecting water quality on non-federal timberlands in California.

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- Provide a feedback loop to RPFs, CAL FIRE Forest Practice Inspectors, state and federal agency personnel, the public, and others regarding what forestry-related practices at high risk sites require improvement to protect water quality.

Appendix 3 4 Example of Comprehensive Monitoring and Adaptive Management Programs (Excerpted from 14 CCR § 916.11.1 (936.11.1))

The Board, with the assistance of the Department of Forestry and Fire Protection, will implement a comprehensive monitoring and adaptive management program for timber harvesting operations in watersheds with salmonid-and-anadromous-trout. Four types of monitoring will be addressed under this program including compliance, implementation, effectiveness, and validation monitoring.

The monitoring program will:

1. Determine whether the operational Forest Practice Rules and associated hill slope and instream mitigation measures afford a level of protection that is both appropriate and adequate to ensure protection and meet the recovery goals for listed salmonids-and-anadromous-trout and the habitat that supports them;
2. Provide monitoring and analyses necessary to ensure all Forest Practice Rules are being implemented fully and correctly consistent with the ~~CESA~~California Endangered Species Act;
3. Provide timely results for the Board to assess effectiveness in meeting the stated policy goals; and
4. Evaluate the effectiveness of minimization and mitigation measures and identify when site-specific rules should be revised to accomplish the program purpose.

The adaptive management program will have five elements addressing:

1. Identification of substantial necessary new information;
2. Collection of substantial new information;
3. Evaluation of substantial new information; and
4. Determination regarding the necessity or benefit of adjustments and improvements to mitigation and protective measures, including the Forest Practice Rules, based upon the substantial new information.

5. Regular reports to the Board and to joint meetings of the Board and Commission about program results.